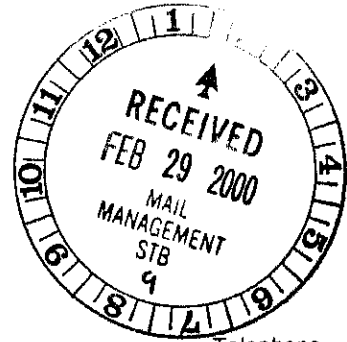


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February 28, 2000

**VIA FEDERAL EXPRESS**

Secretary Vernon A. Williams  
The Surface Transportation Board  
1925 K. St., NW  
Washington, D.C. 20423-0001

Attn: STB Ex Part No. 582

Dear Secretary Williams:

Enclosed for filing are 10 copies of my comments regarding Ex Parte 582 and a diskette containing the enclosed materials in Wordperfect Version 9 format

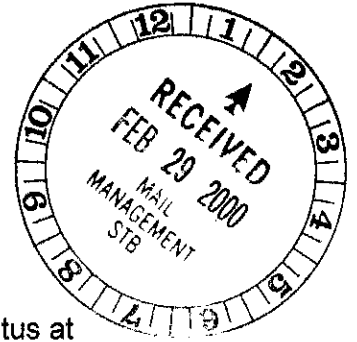
I have prepared the statement on behalf of Burlington Northern Santa Fe Corporation and have been assisted in this effort by Lexecon Inc. If you have any questions, I can be contacted in care of Hal Sider of Lexecon Inc., at the above address in Chicago.

Sincerely,

*Kenneth Arrow/gmd*

Prof. Kenneth Arrow  
Stanford University

## STATEMENT OF KENNETH J. ARROW



I, Kenneth J. Arrow, am Joan Kenney Professor of Economics Emeritus at Stanford University. I received my B.S. in Social Science at The City College of New York in 1940, my M.A. in Mathematics from Columbia University in 1941 and my Ph.D. in Economics from Columbia in 1951. I have taught economics at The University of Chicago, Harvard University, and Stanford University, and I have written more than 200 books and articles in economics and operations research. I am the recipient of numerous awards and honorary degrees, including the Nobel Memorial Prize in Economic Science (1972). The major part of my writing and research has been in the areas of economic theory, the economics of information and organization, industrial organization, and welfare economics. My curriculum vitae and list of publications is attached as Appendix 1.

I would like to submit the following statement to the Surface Transportation Board in response to STB Ex Parte No. 582, requesting comments on the subject of, "railroad

Office of the Secretary

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consolidation and the present and future structure of the North American railroad industry.” In particular, I have been requested by BNSF to comment on the open letter by Union Pacific which urges delaying any hearings on the proposed merger between BNSF and Canadian National until after a discussion of, “the future of the industry,” is concluded.

In this statement I am not in any way attempting to evaluate the proposed merger. I am simply addressing the procedural questions raised by the Union Pacific’s letter, whether preparing some plan for the structure of the railroad industry should be a prerequisite for even considering any proposed merger on its own merits. I also consider more general proposals for a study of possible ownership structures in the railroad industry. For convenience, I will refer any such discussion not focussed on a particular proposed merger as preplanning. Such a preplanning process would inevitably reflect an attempt by the STB and other parties to evaluate industry trends, as well as the social costs and benefits that might result from further railroad consolidations.

To summarize my conclusions, the best attempts by regulators to undertake such an analysis would be hindered by the limitations they face in collecting and evaluating the necessary information. Regulators would need to rely on information provided by railroads and shippers which, due to their private interests, may not have the appropriate incentives to reveal all relevant data. In addition, available information may be less useful to regulators than to the railroads themselves, which have the appropriate incentives to collect, interpret, and act on information on the potential benefits of a merger, subject of course to the usual standards of regulatory review. Delays in the completion of efficient mergers resulting from preplanning would result in harm to consumers. Thus, the preplanning process offers considerable costs but little if any additional value beyond that achieved through standard regulatory review of proposed mergers.

#### Losses from the Preplanning Procedure

There are two obvious losses from adding a preplanning stage to the current STB procedures for evaluating proposed mergers, the costs of delay and the costs of the

preplanning.

(a) Costs of delay: A merger is designed to yield a stream of net benefits, public and private. Delay in accepting the merger means that the benefits are lost during the period of delay. This is a social loss and is not made up by those benefits that are obtained later. Even if the same benefits are ultimately attained, and in general they will not be, they have lower value because they are discounted and therefore less in value than if available immediately. Of course, in any given proposal, the STB may find that the merger has socially adverse consequences, in which case it may disallow it or accept it in some modified form. Even in that case, there is a loss from delay due to preplanning hearings, since the period of uncertainty as to whether the merger will be accepted or not is prolonged.

(b) Costs of preplanning: The preplanning introduces a new stage in STB proceedings. It will require studies by the firms who may think themselves affected by some possible future configuration of railroad ownership, preparation of testimony by them, and of course the time and energy of the STB and its staff, time taken away from

other activities. Many hypothetical situations, which will not arise in practice, will call forth analysis on the part of at least some of the parties. All of this work will not obviate the need in the future for evaluation of any merger that will actually be proposed.

It is unclear what the product of the preplanning will be. At one extreme, it might be, as the Union Pacific letter might be interpreted to suggest, a full plan laying out an ideal consolidation of the North American rail system into a certain number of lines. This will require an intense devotion of resources by the Board, in addition to all the material to be supplied by the various parties (railroads, shippers, local governments, and possibly other interests).

The history of planning in the past has not been very favorable to this rigid formulation. We can perhaps regard the very large failures of planning in communist countries such as the former Soviet Union or China before the reforms as too extreme to be comparable. But most Western European and virtually all developing countries embraced planning from the end of World War II until about 1970, some, such as India, much later. On the whole, planning the future of the economy, even one or two years in

advance, turned out to be simultaneously ineffective in achieving the desired aims and deleterious in creating a cumbersome machinery for review, approval, and the like which made entrepreneurial initiative difficult. At most, the planning was of some use in dealing with the immediate postwar recovery but quickly became irrelevant and damaging as private enterprise could work within a well-ordered financial system.

At another extreme from detailed planning, the preplanning might just be a forum in which alternative views are expressed and analyses presented to serve as background information. This will require less effort on the Board's part but still require large inputs from the interested parties.

Whatever the form of the preplanning, large expenditures will be required in the process.

#### Are There Benefits to Preplanning?

Against these costs, preplanning can be defended only if it can be shown to yield commensurate benefits. These benefits can only take the form of improving decisions in

subsequent merger and acquisition procedures before the STB. Is there any likelihood that the preplanning will in fact be useful in this way?

As the STB has recognized, private initiatives are the best way of mobilizing information and incentives to achieve improved performance in the railroad system by elimination of excess capacity and improvement of connections. A railroad will for its own reasons and on the basis of its extensive experience and detailed knowledge seek out the best candidates for merger or acquisition. It will have a strong incentive to act profitably and, to the extent that private profits reflect increased efficiency both in its own operations and in its service to shippers, in the public interest. Any tendency for a conflict between private and public interests will be examined by the STB in the context of a specific proposal. Consideration of a specific merger will enable the STB to concentrate its attention.

A general proceeding not connected with a specific merger is not apt to elicit the same degree of private incentive to obtain and present information. It is also apt to diffuse the attention of the STB by increasing the range of analysis it must undertake.



The private information of the railroads is not drawn upon to the same extent. It must be stressed that the very intention to merge or acquire is itself a source of information to the STB and, indeed, to the firms themselves. The information revealed is about the gain to the firm, and it is credible because it is seeking to achieve an action. Statements and analyses made in the course of a study which does not itself lead to a decision will inevitably be of lower value in general and, in particular, to the STB in support of its own analysis.

There are two suggestions in the Union Pacific letter that deserve particular comment. One is that further mergers should wait until service is improved. It is hard to see why the difficulties of some railroads in implementing the improved connections that should have come with consolidation should be used to prevent others from achieving these gains. To allow this argument would have perverse incentives; service failure would be rewarded by shelter from competition.

Second, the assumption that the proposed merger would have effects which might call for "strategic responses" by other railroads amounts to saying that competition will

increase, which most of us would interpret as a benefit of the proposed merger.

I therefore conclude that little if any additional value in evaluating mergers and acquisitions will be derived from an extensive preplanning procedure, while the costs of such procedures will be high.

## BIOGRAPHICAL SKETCH

### KENNETH J. ARROW

#### Personal

Born: 23 August, 1921  
Wife's name: Selma  
Children: David Michael and Andrew Seth

#### Education

B.S. in Social Science, City College, New York, 1940. Major: Mathematics.  
M.A., Columbia University, 1941. Field: Mathematics.  
Ph.D., Columbia University, 1951. Field: Economics.

#### Positions

Captain, U. S. Army Air Corps, 1942-46 (Weather Officer).  
Research Associate, Cowles Commission for Research in Economics, 1947-49.  
Assistant Professor of Economics, University of Chicago, 1948-49.  
Consultant, the RAND Corporation, 1948-date.  
Acting Assistant Professor of Economics and Statistics, Stanford University, 1949-50.  
Associate Professor of Economics and Statistics, Stanford University, 1950-53.  
Professor of Economics, Statistics and Operations Research, Stanford University, 1953-68.  
Economist, Council of Economic Advisers, U. S. Government, 1962.  
Visiting Professor of Economics, Massachusetts Institute of Technology, Fall, 1966.  
Fellow, Churchill College (Cambridge, England), 1963-64, 1970, 1973, 1986.  
Guest Professor, Institute for Advanced Studies, Vienna, June 1964, June 1970.  
Professor of Economics, Harvard University, 1968-74.  
James Bryant Conant University Professor, Harvard University, 1974-79.  
Joan Kenney Professor of Economics and Professor of Operations Research, Stanford University, 1979 to 1991.  
Senior Fellow by Courtesy, Hoover Institution on War, Revolution and Peace, 1981-94.  
Part-time Professor, European University Institute, 1986.  
External Professor, Santa Fe Institute, 1988 to date.  
Joan Kenney Professor of Economics Emeritus and Professor of Operations Research Emeritus, 1991 to date.  
Fulbright Professor, University of Siena, Spring 1995.

#### University and Faculty Administration at Stanford University

Executive Head, Department of Economics, 1953-6  
Member and Chair, Executive Committee of the Academic Council  
Acting Executive Head, Department of Economics, 1962-3  
Member and Chair, Advisory Board  
Member and Chair, Senate of the Academic Council  
Director, Stanford Institute for Theoretical Economics, 1991-93  
Director, Stanford Center on Conflict and Negotiation, 1993-5

### Honors and Awards

Gold Pell Medal (highest grades), City College, New York, 1940.  
Phi Beta Kappa.  
Social Science Research Fellow, 1952.  
Fellow, Center for Advanced Study in the Behavioral Sciences, 1956-57.  
John Bates Clark Medal, American Economic Association, 1957.  
LL.D. (honorary), University of Chicago, 1967.  
M.A. (honorary), Harvard University, 1968.  
Marshall Lecturer, Cambridge University, Spring 1970.  
D.Soc/Eco.Sci. (honorary), University of Vienna, 1971.  
LL.D. (honorary), City University of New York, 1972.  
Nobel Memorial Prize in Economic Science, 1972.  
John R. Commons Lecture Award, Omicron Delta Epsilon, 1973.  
D.Sci. (honorary), Columbia University, 1973.  
D.Soc.Sci. (honorary), Yale University, 1974.  
Dr. (honorary), Universite Rene Descartes, 1974.  
LL.D. (honorary), Hebrew University of Jerusalem, 1975.  
LL.D. (honorary), University of Pennsylvania, 1976.  
D.Pol.Sci. (honorary), University of Helsinki, 1976.  
Member, National Academy of Sciences (Chairman, Section 54, 1976-1979, Council member 1990 to date).  
Fellow, American Academy of Arts and Sciences (Vice President, 1979-80, 1991-94).  
Member, American Philosophical Society.  
Member, Institute of Medicine.  
Foreign Honorary Member, Finnish Academy of Sciences.  
Corresponding Member, British Academy.  
Sigma Xi (President, Stanford Chapter, 1981-82).  
Tanner Lecturer, Oxford University, Spring 1983.  
2nd Class Order of the Rising Sun, Japan, 1984.  
Tanner Lecturer, Harvard University, Spring 1985.  
Dr. of Letters, University of Cambridge, 1985.  
Dr. Honoris Causa, Universite d'Aix-Marseille III, 1985.  
von Neumann Prize of The Institute of Management Sciences and the Operations Research Society of America, 1986.  
LL.D. (honorary), Washington University in St. Louis, 1989.  
Clarendon Lectures, Oxford University, November 1989.  
LL.D. (honorary), Ben-Gurion University of the Negev, 1992.  
Member, Pontifical Academy of Social Sciences.  
Laurea (honoris causa) Universita Cattolica del Sacro Cuore (Milan)  
Dr. (hon.) Università del Sacro Cuore, 1994.  
Dr. (hon. causus) University of Uppsala, 1995.

### Professional Societies

Econometric Society (Fellow; Vice President, 1955, President, 1956, Member of the Council, 1983).  
Institute of Mathematical Statistics (Fellow).  
American Statistical Association (Fellow).  
American Economic Association (Member, Executive Committee, 1967-1969; President-elect, 1972; President, 1973; Distinguished Fellow).  
The Institute of Management Sciences (President, 1963; Chairman of the Council, 1964).  
Western Economic Association (President, 1980-1981).  
American Association for the Advancement of Science (Fellow; Chair, Section K, 1982).  
International Society for Inventory Research (President, 1983-1988).  
Honorary President, International Economic Association; President 1983-1986; Member, Executive Committee, 1986-1992.  
The Society for Social Choice and Welfare, Caen, France, First President, 1992-93.

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2. [1958] (with S. Karlin and H. Scarf) *Studies in the Mathematical Theory of Inventory and Production*. Stanford, California: Stanford University Press.
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6. [1965] *Aspects of the Theory of Risk-Bearing*. Yrjö Jahnssonin säätiö Helsinki, Finland.
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16. [1984] *Collected Papers of Kenneth J. Arrow, Volume 3, Individual Choice under Certainty and Uncertainty*. Cambridge, Massachusetts: The Belknap Press of Harvard University Press.
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5. [1991] (as member of the Oversight Review Board of the National Acid Precipitation Assessment Program) *The Experience and Legacy of NAPAP.* Washington, DC: National Acid Precipitation Assessment Program.

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